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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,588	11/19/2001	Harri Lahti	4925-148PUS	2676

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EXAMINER

CHANG, RICHARD

ART UNIT PAPER NUMBER

2663

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/937,588

Applicant(s)

LAHTI ET AL.

Examiner

Richard Chang

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 8-10 and 12 is/are allowed.
- 6) ☒ Claim(s) 6 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments and amendments, filed 12/9/2005, with respect to claims 1-5, 8-10 and 12 have been fully considered, a new ground of rejections of claims 6-7 is made as follow.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding to Claims 6-7, the claim is vague and indefinite because the limitation "means for indicating a change of clock signals by sufficiently accurately cophasal clock signals and for outputting information indicating said change" does not clearly point to a structure or step in claim 6. In particular, the step to obtain and use "sufficiently accurately cophasal clock signals" is missing.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 5,631,896 ("Kawase et al.") in view of US patent 4,083,009 ("Bickford et al.") and further in view of US patent 5,515,403 ("Sloan et al.").

Regarding claims 6-7, Kawase et al. teach a hitless path switching apparatus and method in digital communication systems (method for changing parallel signals in a digital data transmission, including over a radio link), in which transmission is parallel in both working and protection paths (in which method the data flow to be transmitted is divided into several transmissions) (See Fig. 12) comprising steps of

- there is selected a primary transmission path (51 See Fig. 12, Col 5, lines 48-54),
- there is Header Error Control (HEC) byte in the ATM format, (inherently there is calculated a check sum for the data flow of the length of the processed section, and said check sum is added to the processed section of the data flow in order to form a data frame to be transmitted) (See col. 10, lines 39-48),
- in the transmission paths, there is carried out the transmission of the data frame (S1, see Fig. 3),
- there is Cyclic Redundant Check (CRC) calculation using the HEC byte is for error detection in both path (correctable errors in the received data frames

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are corrected, and an error sum for each transmission paths is calculated) (See col. 10, lines 39-48),

- there is bit error detection taking place in both a working path and a protection bath to determine the path selection with least error (the error sum of the selected transmission path is compared with the other paths and when necessary, the transmission path selected as the one to be received is changed over to a path with a smaller error sum) (See col. 10, lines 57-64), and

- the information in the data flow of the processed section of the selected transmission path is conducted to the output cable (72) (See Fig. 12, Col 9, lines 40-53).

Kawase et al. teach substantially all the claimed invention but did not disclose expressly the particular application involving limitations of

“changing parallel signals in a digital data transmission over a radio link” and “outdoor unit for digital data transmission over a radio link and for selecting the data flow for parallel signals in digital data transmission wherein said outdoor unit comprises at least a transmitter for transmitting the signal to be changed and respectively a receiver for receiving said signal”.

Bickford et al. teach a high reliability diversity radio communication system wherein outdoor unit (102-108) for digital data transmission over a radio link and for selecting the data flow for parallel signals in digital data transmission wherein said outdoor unit comprises at least a transmitter (112) for transmitting the signal to be changed and respectively a receiver (116) for receiving said signal (see Fig. 1, Col. 3, lines 26-46).

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A person of ordinary skill in the art would have been motivated to employ Bickford et al. in Kawase et al. in order to obtain an outdoor unit for digital data transmission over a radio link and for selecting the data flow for parallel signals in radio digital data transmission and to take advantage of a high reliability diversity radio communication system with a transmitter for transmitting the signal to be changed and respectively a receiver for receiving said signal in claims 6-7.

The suggestion/motivation to do so would have been to a high reliability diversity radio communication system with a transmitter for transmitting the signal to be changed and respectively a receiver for receiving, as suggested by Bickford et al. Kawase et al. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Bickford et al. with Kawase et al. to obtain the inventions specified in claims 6-7.

Kawase et al. and Bickford et al. teach substantially all the claimed invention but did not disclose expressly the particular application involving limitations of

“indicating a change of a clock signal by sufficiently accurately cophasal clock signals”.

Sloan et al. teach a method for smooth clock alignment and switch by indicating a change of a clock signal (active clock) after waiting for a sufficiently accurately cophasal clock signals (phase detection and alignment) (see Fig. 3, Col. 4, lines 29-53).

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A person of ordinary skill in the art would have been motivated to employ Sloan et al. in Kawase et al. and Bickford et al. in order to obtain an outdoor unit for digital data transmission over a radio link and for selecting the data flow for parallel signals in radio digital data transmission and to take advantage of smoothing clock alignment and switch by indicating a change of a active clock after waiting for a sufficiently accurately cophasal phase detection and alignment in claims 6-7.

The suggestion/motivation to do so would have been to smooth clock alignment and switch by indicating a change of a active clock after waiting for a sufficiently accurately cophasal phase detection and alignment, as suggested by Sloan et al. Kawase et al. in Col. 4, lines 29-53. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Sloan et al. with Kawase et al. and Bickford et al. to obtain the inventions specified in claims 6-7.

Allowable Subject Matter

6. Claims 1-5, 8-10, 12 are allowed.

Reasons for indicating Allowable Subject Matter

7. The following is an examiner's statement of reasons for allowance:

The prior art along or in combination fails to teach or make obvious the following limitations:

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“changing a propagation assured signal on the basis of an error sum obtained from an outdoor unit, said changeover device being arranged to change clock signals after waiting for sufficiently accurately cophasal clock signals wherein a clock signal is changed over after waiting for a sufficiently accurately cophasal clock signals” as recited in the independent claims 1,3 and 8.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Chang whose telephone number is

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(571) 272-3129. The examiner can normally be reached on Monday - Friday from 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


rkC

Richard Chang
Patent Examiner
Art Unit 2663


RICKY Q. NGO
SUPERVISORY PATENT EXAMINER